and "line voltage" would be understood to one skilled in the art as already referring to rms voltages.

Additionally, as stated in American Electricians' Handbook, twelfth edition, page 9-7, voltage is defined as, "[t]he greatest root-mean-square (effective) difference of potential between any two conductors of the circuit concerned." Applicant respectfully submits after reading the claims in light of the specification, one skilled in the art would recognize a reference to a voltage as being a reference to an rms voltage unless indicated otherwise. Accordingly, Applicant submits, no new matter has been added to the specification and claims.

For the reasons set forth above, Applicant respectfully requests that the objection to the amendment under 35 U.S.C. § 132 be withdrawn.

The rejection of Claims 1-20 under 35 U.S.C. § 112 first paragraph is respectfully traversed.

Applicant respectfully submits that an artisan of ordinary skill in the art reading the disclosure, would understand that a reference to a voltage refers to an rms voltage unless other wise indicated. As is defined in America Electricians' Handbook, twelfth edition page 9-7, the voltage (of a circuit) is understood by those skilled in the art to be a reference to an rms voltage unless otherwise indicated. As such, Applicant respectfully submits that such a limitation is supported by the specification.

Accordingly, for at least the reasons set forth above, Applicant respectfully requests the rejection to Claims 1-20 under section 112, first paragraph be withdrawn.

The rejection of Claims 10-20 under 35 U.S.C. § 112 second paragraph is respectfully traversed. Applicant respectfully submits that Claims 10-20 satisfy Section 112, second paragraph. Applicant respectfully submits that one skilled in the art, after reading the specification in light of the Figures, would understand Claims 10-20 because a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what

it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used, and Applicant respectfully submits that no gap between necessary structural connections exists. See MPEP § 2173.05 (g). Applicant therefore respectfully submits that Claims 10-20 are definite and contain subject matter that is supported by the specification in such a way as to enable one skilled in the art to make and/or use the invention.

Accordingly, Applicant respectfully requests that the rejection of Claims 10-20 under Section 112, second paragraph, be withdrawn.

The rejection of Claims 1-20 under 35 U.S.C. § 102(b) as being anticipated by Allos (U.S. Pat. No. 4,707,760) is respectfully traversed.

Allos describes a mains protection device for AC mains including a voltage supply circuit (1), a voltage comparison circuit (2); a control circuit (3); and an output and status display circuit (4). In normal operation, the device detects when the peak of the instantaneous value of alternate half cycles of the mains goes outside a predetermined range to provide a first signal state, i.e. a high condition at the output of NAND gate IC3N. When the peak value subsequently returns within range, multivibrator IC4R acts as a one minute timer to produce a second signal state (a low state at the output of NAND gates IC3N) at the end of that period if the peak remains within range.

Claim 1 recites a method for protecting an electrical device, the method comprising the steps of "monitoring a line rms voltage to detect a high voltage condition such that the rms voltage is above a predetermined voltage range...monitoring the line rms voltage to detect a low voltage condition such that the rms voltage is below the predetermined range...electrically isolating the electrical device such that the electrical device does not receive electricity when at least one of a high voltage condition and a low voltage condition is detected."

Allos does not describe or suggest a method for protecting an electrical device wherein the method comprises monitoring a line rms voltage to detect a high voltage condition such that the rms voltage is above a predetermined voltage range, monitoring the line rms voltage to detect

a low voltage condition such that the rms voltage is below the predetermined range, electrically isolating the electrical device such that the electrical device does not receive electricity when at least one of a high voltage condition and a low voltage condition is detected. Moreover, Allos does not describe or suggest monitoring a line rms voltage to detect a high voltage condition such that the rms voltage is above a predetermined voltage range and monitoring the line rms voltage to detect a low voltage condition such that the rms voltage is below the predetermined range. Additionally, Allos does not describe or suggest monitoring a line rms voltage. Rather, in contrast to the present invention, Allos describes detecting when the peak of the instantaneous value of alternate half cycles of the mains goes outside a predetermined range to provide a first signal state. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Allos.

Claims 2-9 depend from independent Claim 1. When the recitations of Claims 2-9 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 2-9 likewise are patentable over Allos.

Claim 10 recites a circuit for protecting an electrical device wherein the circuit is configured to "monitor a line rms voltage to detect a rms voltage above a predetermined voltage range...monitor the line rms voltage to detect a rms voltage below the predetermined range...electrically isolate the electrical device such that the electrical device does not receive electricity when at least one of a rms voltage above the predetermined voltage range and a rms voltage below the predetermined range is detected."

Allos does not describe or suggest a circuit for protecting an electrical device wherein the circuit is configured to monitor a line rms voltage to detect a rms voltage above a predetermined voltage range, monitor the line rms voltage to detect a rms voltage below the predetermined range, electrically isolate the electrical device such that the electrical device does not receive electricity when at least one of a rms voltage above the predetermined voltage range and a rms voltage below the predetermined range is detected. Moreover, Allos does not describe or suggest a circuit that is configured to monitor a line rms voltage. Rather, in contrast to the present

invention, Allos describes detecting when the peak of the instantaneous value of alternate half cycles of the mains goes outside a predetermined range to provide a first signal state. Accordingly, for at least the reasons set forth above, Claim 10 is submitted to be patentable over Allos.

Claims 11-19 depend from independent Claim 10. When the recitations of Claims 11-19 are considered in combination with the recitations of Claim 10, Applicant submits that dependent Claims 11-19 likewise are patentable over Allos.

Claim 20 recites a circuit for protecting an electrical device wherein the circuit is configured to "monitor a line rms voltage to detect a high voltage condition such that the voltage is above a predetermined voltage range...monitor the line rms voltage to detect a low voltage condition such that the voltage is below the predetermined range...electrically isolate the electrical device such that the electrical device does not receive electricity when at least one of a high voltage condition and a low voltage condition is detected...monitor the line rms voltage after electrically isolating the electrical device to detect a voltage within the predetermined range...restore power to the electrical device when the line rms voltage is detected to be within the predetermined voltage range...provide a visual indication when a low voltage condition is detected...provide a visual indication when a high voltage condition is detected...provide a visual indication when the line voltage is being tested."

Allos does not describe or suggest a circuit for protecting an electrical device wherein the circuit is configured to monitor a line rms voltage to detect a high voltage condition such that the voltage is above a predetermined voltage range, monitor the line rms voltage to detect a low voltage condition such that the voltage is below the predetermined range, electrically isolate the electrical device such that the electrical device does not receive electricity when at least one of a high voltage condition and a low voltage condition is detected, monitor the line rms voltage after electrically isolating the electrical device to detect a voltage within the predetermined range, restore power to the electrical device when the line rms voltage is detected to be within the predetermined voltage range, provide a visual indication when a low voltage condition is

detected, provide a visual indication when a high voltage condition is detected, and provide a visual indication when the line voltage is being tested. Moreover, Allos does not describe or suggest a circuit that is configured to monitor a line rms voltage. Rather, in contrast to the present invention, Allos describes detecting when the peak of the instantaneous value of alternate half cycles of the mains goes outside a predetermined range to provide a first signal state. Accordingly, for at least the reasons set forth above, Claim 20 is submitted to be patentable over Allos.

Additionally, Applicant respectfully submits that one skilled in the art would recognize a reference to a voltage refers to an rms voltage unless otherwise indicated. Therefore, the reference to rms is fully supported in the original specification, and accordingly this recitation is entitled to full patentable weight and should be fully considered by the Patent Office.

For at least the reasons set forth above, Applicant respectfully requests that the Section 102 rejection of Claims 1-20 be withdrawn.

Additionally, because the Office Action dated November 7, 2002 did not give the term "rms" any patentable weight, Applicant respectfully requests the finality of the Office Action be withdrawn and the claims examined giving the recitation "rms" full patentable weight.

In view of the foregoing remarks, all the claims now active in the application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

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